

Editorial**Precision Medicine Approaches for Psychosis Treatment****Sami Siraj**

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Precision The precision medicine approach takes into account individual variability in genes, environment, and lifestyle and holds great promise in revolutionizing the treatment of various disorders, including psychosis. Psychosis is a mental health condition characterized by a loss of contact with reality, and it can occur in disorders such as schizophrenia and bipolar disorder. By integrating psychiatry and neurology, precision medicine aims to provide personalized and targeted interventions for individuals with psychosis. Several approaches are used for improved treatment outcomes in psychosis patients.

Genetic biomarkers: Advances in genomic research have identified genetic variations associated with an increased risk of developing psychosis. Understanding these genetic biomarkers can help identify individuals at risk early and tailor treatment strategies based on their genetic profile. Genetic testing can assist in determining the optimal medication selection, dosage, and potential side effects.

Pharmacogenomics: Psychiatric medications, including antipsychotics, can have varying efficacy and side effect profiles among different individuals. Pharmacogenomics studies the influence of genetic variations on drug response,

metabolism, and side effects. By analyzing an individual's genetic makeup, clinicians can predict their response to specific medications and adjust treatment plans accordingly, improving treatment outcomes and reducing adverse effects.

Neuroimaging and biomarkers: Neuroimaging techniques, such as magnetic resonance imaging (MRI) and functional MRI (fMRI), can provide insights into brain structure, function, and connectivity. These imaging methods, combined with other biomarkers like blood-based markers or cerebrospinal fluid analysis, can help identify subtypes within the broad category of psychosis. These subtypes can inform treatment selection and predict treatment response, leading to more targeted interventions.

Digital phenotyping and wearables: The use of digital tools, such as smartphones and wearable devices, allows continuous monitoring of various parameters like sleep patterns, physical activity, social interactions, and cognitive function. These data, combined with machine learning algorithms, can help in detecting early signs of psychosis relapse, predicting treatment response, and personalizing interventions based on individual patterns and needs.

Integrated care models: Precision medicine in psychosis involves collaborative approaches

between psychiatrists, neurologists, geneticists, and other healthcare providers. By integrating diverse expertise, clinicians can develop comprehensive treatment plans that address both the psychiatric and neurological aspects of the disorder. This interdisciplinary approach enables personalized interventions and a more holistic understanding of the underlying mechanisms of psychosis.

Patient-centered care: Precision medicine emphasizes a patient-centered approach, recognizing the unique experiences and needs of individuals with psychosis. It encourages shared decision-making between healthcare providers and patients, considering their preferences, values, and goals in treatment planning. This

approach improves treatment adherence, engagement, and overall satisfaction with care. While precision medicine in psychosis holds immense potential, further research and integration of these approaches into routine clinical practice are needed. Large-scale studies, data sharing, and collaborative efforts are crucial for advancing the field and harnessing the benefits of precision medicine for individuals with psychosis.

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